

NOTES ON *LYGOPHIS* FITZINGER

Revalidation of two subspecies

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INTRODUCTION

A revision of the genus *Lygophis* Fitzinger must await the accumulation of greater number of specimens than are now available in the collections of Butantan Institute and others.

In the course of the revision of the *Lygophis* in the Butantan collections two forms have come to our attention. Since Amaral's review on the subject, these forms have been considered *lineatus* synonyms. In this paper, on the basis of observation of a greater number of specimens, we revalidate and redescribe those forms.

HISTORICAL

While the 10th edition (1758) of Linnaeus's *Systema Naturae* (33) is the oldest valid reference, the consultation of older Linnaeus paper such as *Mus. Ad. Frid.* (32), etc., becomes indispensable on account of the incompleteness of his descriptions.

In all Linnaeus descriptions of *Coluber lineatus* and *C. minervae*, he give no details, but we can consider the species *C. minervae* synonym of *C. lineatus*, as will be apparent from the data and literature presented in this paper.

Daubenton 1784 (13) also mentions *Coluber lineatus* (I did not read this paper, but I follow the authors).

Gmelin 1788 (21) repeats Linnaeus descriptions, but while omitting the species *minervae*, he describes another one, the *Coluber atratus*. However, Boulenger (9) showed that *C. atratus* is a *pro parte lineatus*.

Lacépède, 1799 (28) referred to *C. lineatus* and *C. minervae* and gave a brief description of these species. In the newest editions of Lacépède's works this descriptions remains un-modified and agrees with *lineatus* L.

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Latreille 1802 (30) cites the species *lineatus* under the name of La Raieé (not seen).

I had no possibility of consulting the works of Shaw 1802 (40) and Daudin 1804 (14). In this connection, I follow the authors and consider their *lineatus* identical with *lineatus* L.

Fitzinger 1826 (19) cites briefly the species *Coluber lineatus* L. and *C. minoræ* L. and considers their habitat as unknown. This is in contradiction with Linnaeus' statement of *Asia* and *Indiis* respectively.

Cuvier 1829 (12) places the species *C. atratus* and *C. terlineatus*, Lacépède in the synonymy of *lineatus*. It should be noted however, that is a *pro parte atratus* and not a strict synonym of *lineatus*.

Merrem 1820 (35) puts the species *lineatus* and *minoræ* in the genus *Natrix* while considering *C. atratus* synonym of *jaculatus*.

Schlegel 1837 (42) gives a full description of specimens received from *Surinam*. He correctly ascribes them to the species *lineatus* L. and includes this species in the genus *Herpetodryas*. But in his paper he also mentions other specimens which he assumes to have come from Brazil and calls "*variété de climat*" this can be better seen from the quotation given below:

"Le Brésil produit une jolie variété de climat de cet *Erpetodryas*, qui nous a été adressé des musées de Vienne et de Berlin sous les noms de *Coluber chamissoni* et *moniliger*. Les individus sont en tout analogues a ceux du Surinam excepté qu'ils ont trois raies moins distinctes, interrompues et composées d'un grand nombre de tâches, particulièrement sur les bords des raies, ce qui en augmente le nombre du double. Les écailles sont souvent bordées de noir."

However, lack of information concerning the exact *habitat* of the latter specimens makes it impossible to identify them safely to any specimens or subspecies posteriorly described. Probably they belonged to the species later described by Schenkel as variety *meridionalis*.

Fitzinger 1843 (20) created the genus *Lygophis* indicating *Herpetodryas lineatus* Schlegel as genotype of the new genus. This could lead us to consider *Lygophis lineatus* Fitzinger as *pro parte lineatus*, and *meridionalis*. Yet his indication of Schlegel as the author of the species might well be a slip very frequent in his epoch. It is probably more convenient, therefore, to consider Schlegel's *Herpetodryas lineatus* Fitzinger as identical to *Coluber lineatus* Linnaeus.

Duméril 1853 (15) created the genus *Dromicus* in which he included the species *lineatus* citing also Schlegel and not Linnaeus as the author of the species.

Duméril, Bibron & Duméril 1854 (16) presented a redescription of *Dromicus lineatus* in which they mix true, northern, *lineatus* with specimens coming from Santa Cruz (probably Paraguay). But Boulenger showed already

that the Santa Cruz lot belongs to *Liophis genimaculatus*. On page 657 of volume 7 of "Erpetologie Générale", Duméril et al. (16) mention also the so called *variété de climat*, previously described by Schlegel. We should therefore consider *Dromicus lineatus* D., B. et D. as a compound of *Lygophis lineatus* (L.), *Lygophis lineatus* var. *meridionalis* (Schenkel) and *Liophis genimaculatus* Boettger.

Günther, 1858 (23) identifies as *lineatus* a species that Boulenger later proved to be *Liophis portifrons*.

Cope, 1862 (10) describes the two new species *flavifrenatus* and *dilepis*. He also mentions the species *lineatus*, but in that respect I will show in this paper that his *lineatus* specimens belong to the var. *meridionalis* Schenkel.

Reinhardt and Lüthe mentions, Guianas, Brazil, Guaiquil and Mexico as range of *Lygophis lineatus*. Their specimens were probably a compound of *Lygophis lineatus* (L.), from Guianas and Brazil, and *Lygophis dilepis* from Guaiquil. These from Mexico should belong to another genus, probably *Conophis*.

Jan, 1867 (25) produce a figure correctly identified as *lineatus* (L.).

Müller, 1878 (36) identifies as *Dromicus lineatus* Surinamese and Mexican specimens. Although he was correct to the Surinamese, he probably was wrong as to the Mexican specimens which should belong to the species *Conophis lineatus*.

Boulenger, 1894 (9) puts *dilepis* in the synonymy of *lineatus*.

Peracca, 1895 (38) makes an excellent redescription of the species *dilepis*. He also mentions *Aporophis lineatus*, but according to his own description it should var. *meridionalis* described later by Schenkel.

Boulenger, 1896 (9) reconsiders his opinion of 1894 and accepts again *dilepis* as valid species.

Boettger, 1898 (7) cites the species *flavifrenatus* and *lineatus* and including in the latter, specimens coming from Colombia and Surinam.

Berg, 1899 briefly mentions the species *dilepis* and *flavifrenatus*.

Andersson, 1900 (5) in his revision of limacau types redescribes the types of *lineatus* and shows that *Coleber minorave* is a synonym of *lineatus*.

Schenkel, 1900 (42) describes *Aporophis lineatus* var. *meridionalis*.

Lindholm, 1902 (31) identifies correctly specimens of *lineatus*.

Gomes, 1918 (22), identifies correctly *lineatus* L.

Müller, 1928 (37) describes the sub-species *Aporophis lineatus latitatus*. His description, praecoculars excepted, agrees with Cope's description of *dilepis*. It also agrees with Peracca's redescription of the same species, *Aporophis*

lineatus lativittatus should be included therefore in the synonymy of *Lygophis dilepis* Cope.

Amaral, 1929 (2) considers as synonyms the species *Lygophis lineatus* (L.), *Aporophis lineatus* var. *meridionalis*, *A. lineatus lativittatus* and *Lygophis dilepis*.

The specimens which were classified by Amaral, 1934 (3) as *lineatus* belong probably to the species *dilepis* which is revalidated in this paper.

Hoge (24) describes a new species, *L. paucidens*.

The bibliographical analysis and the comparative of the *Lygophis* material of the Butantan Institute lead us to the conclusion of the validity of six forms occurring in Brazil. These can be divided into two groups. The first possessing scales in 17 rows includes the species *Lygophis flavifrenatus* Cope, *Lygophis amocinus* Jan and *Lygophis paucidens* Hoge. The second group possesses scales in 19 rows and includes *Lygophis lineatus* (L.), *Lygophis dilepis* Cope and *Lygophis lineatus meridionalis* (Schenkel).

The species of the first group are well characterized and do not need further discussion.

As regards the second group the following comments are needed. Cope based his *Lygophis dilepis* on the presence of 2 preoculares, shorter tail, broader lateral bands, while his *lineatus* (which this paper will prove to be *meridionalis*) has 1 proocular, longer tail and narrower lateral bands. However if we compare topotypes of our collection of *Lygophis dilepis* with the type specimen of *Lygophis lineatus* and with specimens of typical *lineatus* from French Guiana (Brazilian border line), we can see that the only difference between the two species is the presence of larger, not constricted at the neck, lateral bands in *Lygophis dilepis*. Cope's observation of a shorter tail in the *dilepis* as compared to the *lineatus* species is probably due to the fact that he confounded the species *meridionalis* and *lineatus*. And his remark of two preoculares in *dilepis* could be due to an anomaly. It should also be noted that the crossing of the lateral band could simulate a division of the preocular.

The variety *meridionalis* must be considered as a valid subspecies. This is indicated by the presence of discontinued lateral band; ventrals with black lateral spots; first, second, third and fourth paraventrals with black edges; longer tail; and a fewer number of teeth.

This paper shows therefore that *dilepis* Cope and *meridionalis* Schenkel are valid forms.

All these forms are easily distinguished on the characters given in the following synopsis.

SYNOPSIS OF THE BRAZILIAN SPECIES

I — Scales in 19 series.

A. Three distinct dark streaks, not interrupted on the neck; the 1th, 2th, 3th and 4th series of dorsal scales white or nearly white:

- 1 — lateral streak > 1 scale wide on the body (much larger on the head) (pl. 1 fig. 1) *lineatus lineatus*
- 2 — lateral streak 3 or more scales wide (pl. 1, fig. 2) *lineatus dilepis*

B. Three indistinct dark bands, interrupted on the neck; lateral scales heavily dotted with black; ventrals with a lateral serie of black spots (pl. 1, fig. 3)

lineatus meridionalis

II — Scales in 17 series.

A. Max. teeth more than 10

- 1 — Ventrals 157-178; pattern and colour near meridionalis (pl. 1, fig. 5) *flavifrenatus*
- 2 — Ventrals 137-143; uniform dark with a serie of whitish spots on the 3th or 4th series of scales (pl. 1, fig. 4) *amoenus*

B. Max. teeth 10; pattern near these of *dilepis* *paucidentis*

Genus *Lygophis* Fitzinger, 1824

Lygophis lineatus lineatus (L., 1758)

- 1758 *Coluber lineatus* Linnaeus — Syst. Nat. (10) 1:221
- 1758 *Coluber minervae* Linnaeus — 1. c. 227



- 1766 *Coluber lineatus* Linnaeus — Syst. Nat. (11) 1:382
 1766 *Coluber minervae* Linnaeus — 1. c. 388
 1784 *Coluber lineatus* Daubenton — Quadr. Ovip. Serpens: 668
 1788 *Coluber atratus* Gmelin — Syst. Nat. (13):1103 (pro parte)
 1788 *Coluber lineatus* Gmelin — 1. c. 1104
 1789 *Coluber lineatus* (La Rayée) Lacépède — Hist. Nat. Serp. 2:215
 1789 *Coluber iaculus* Lacépède — 1. c. 23 (pro parte)
 1802 *Coluber jaculatrix* Latreille — Rept. 4:173
 1802 *Coluber lineatus* Shaw — Gen. zool. 3:529
 1802 *Coluber jaculatrix* Shaw — 1. c. 3:536
 1803 *Coluber lineatus* Daudin — Hist. Nat. Rept. 7:25 (pro parte)
 1803 *Coluber jaculatrix* Daudin — 1. c. 53
 1803 *Coluber atratus* Daudin — 1. c. 86 (pro parte?)
 1820 *Coluber (natrix) lineatus* Merrem — Vers. Syst. Amph. 112
 1826 *Coluber lineatus* Fitzinger — N. Clas. Rept. 58
 1826 *Coluber minervae* Fitzinger — 1. c. 57
 1826 *Coluber terlineatus* Lacépède — Oeuvres du Conte de Lacépède 4: 106 e 304
 1826 *Coluber minervae* Lacépède — 1. c. 96
 1826 *Coluber iaculus* Lacépède — 1. c. 108 e 371
 1832 *Coluber lineatus* Lacépède — Oeuvres du Conte de Lacépède 4:(2) 154
 1832 *Coluber lineatus* Lacépède — Serpens 3: (1) 318
 1832 *Coluber (natrix) minervae* Lacépède — 1. c. 144 1: (2)
 1832 *Coluber jaculatrix* Lacépède — 1. c. 238
 1837 *Herpetrodryas lineatus* Schlegel — Phys. Serp. 2:191 e 1:153 (pro parte)
 1853 *Dromicus lineatus* Duméril — Prodr. Class. Ophid.
 1854 *Dromicus lineatus* Duméril, Bibron et Duméril — Erp. Gén. 7:655 (pro parte)
 1858 *Dromicus lineatus* Günther — Cat. 134 (pro parte)
 1863 *Lygophis lineatus* Reinhardt et Lütke — Bidrag til. Vestind. Nat. Foren Vidensk. meddel. 10 (pro parte)
 1882 *Dromicus lineatus* Fischer — Arch. f. Nat. 285.
 1885 *Aporophis lineatus* Cope — Proc. Ac. Philadelphia 76
 1867 *Dromicus lineatus* Cope — Proc. Ac. Philadelphia 76
 1867 *Dromicus lineatus* Jan — Icon. Gén. Ophid. 24, pl. 6, fig. 1
 1894 *Aporophis lineatus* Boulenger — Cat. Sn. Brit. Mus. 2:158 (pro parte)
 1899 *Aporophis lineatus* Anderson — Bih. till. K. Sv. Vet. Akad. Handling 26: (4)
 1930 *Lygophis lineatus* Amaral — Mem. Inst. Butantan 4:169 (pro parte)
 1936 *Lygophis lineatus* Amaral — Mem. Inst. Butantan 10: 112.
 Type locality — Asia (in errore)

Range: Guianas and adjacent territory, Brazil — Amapa territory, Amazon and Pará States

Name: Jararaca listada, Brazil; Red-striped Snake, English

Body slender; rostral as broad or broader than deep; visible from above; internasals shorter than praefrontals which are as long as broad; frontal narrow, narrowly separated from the praecocular; supraoculars longer than his distance from the end of the snout, as long or a little shorter than the parietals, which are twice as long as broad; nasal divided, in contact with the 1th. and 2th. upperlabials; loreal as deep or a little deeper than long, in contact with 2th. and 3th. upperlabials; 1 praecocular reaching the upper surface of the head; eye moderate; postoculars 2; temporals 1+2, 1th. in contact with the 2 postoculars 6th. and 7th. upper labials which are longer than deep; supralabials 8, 6th. larger below, lower labials 9-10; 5 lower labials (or six?) in contact with the anterior chin-shields, which are as long or longer than the posterior; anal divided; scales in 19 rows.

A dark brown vertebral band extends from the supranasals through the praefrontals, the frontal and internal border of the supraoculars, the parietals, throughout the body occupying 3 scales and the halves of the adjacent row below. A dark lateral line (less one scale wide on the body) extends from the loreal and pass through the eye (where he is broader) to the end of the tail. (pl. 11.

Lygophis lineatus dilepis Cope, 1862

- 1862 *Lygophis dilepis* Cope — Proc. Ac. Nat. Sc. Philadelphia 81: 348
1863 *Lygophis lineatus* Reinhardt et Lütke — Nat. Foren. Vidensk pro parte
1885 *Lygophis dilepis* Cope — In. Amer. Philos. Soc, 22:191
1894 *Aporophis lineatus* Boulenger — Ann. & Mag. Nat. Hist. (6) 12:346
1894 *Aporophis lineatus* Boulenger — Cat. Sn. Brit. Mus. 2:158 (pro parte)
1895 *Aporophis dilepis* Peracca — Boll. Mus. Zool. Anat. Torino 10 (195):15
1896 *Aporophis dilepis* Boulenger — Cat. Sn. Brit. Mus. 3:634
1899 *Aporophis dilepis* Berg — An. Mus. Nac. Buenos Aires 2:18
1928 *Aporophis lineatus laticittatus* Muller — Zool. Anz. 77:74
1929 *Lygophis lineatus* Amaral — Mem. Inst. Butantan 1:20, 19
1934 *Lygophis lineatus* Amaral — Mem. Inst. Butantan 8:186
1936 *Lygophis lineatus* Amaral — Mem. Inst. Butantan 10: (pro parte)
1944 *Lygophis lineatus* Dunn — Caldasia 2: (10) 489

Type locality — Paraguay

Range: From Rio Grande do Norte, Brazil throughout Mato Grosso and Paraguay to Norter Argentina

Name: Jararaca listada, Brazil.

Body slender; rostral broader than deep; just visible from above; internals as broad as long; frontal nearly twice as long as broad, longer than his distance from the end of snout, as long or a little longer than the parietals; nasal divided; loreal as long as deep; 1 proocular, visible from above; postoculars 2, superior deeper than inferior; temporals 1-2; upper labials 8; lower labials 10 (exceptionally 9 or 8); scales in 19 rows; ventrals 169-178 (δ) and 159-180 (η); anal divided; caudals 66-85.

For pattern and colour, see original description

Lygophis lineatus meridionalis (Schenkel, 1900)

- 1837 *Herpetodryas lineatus* Schlegel — Phys. Serp. 2:153 (pro parte)
 1853 *Herpetodryas lineatus* Duméril — Prod. class. ophid. 2:81 (pro parte)
 1854 *Dromicus lineatus* Duméril, Bibron et Duméril — Erp. Gen. 7:655 (pro parte)
 1895 *Aporophis lineatus* Peracca — Boll. Mus. éool. Anat. Torino 10:17 (pro parte)
 1900 *Aporophis lineatus* var. *meridionalis* Schenkel — Verh. Ges. Basel 13:160
 1929 *Lygophis lineatus* Amaral — Mem. Inst. Butantan 4:19
 1934 *Lygophis lineatus* Amaral — Mem. Inst. Butantan 4:19
 1936 *Lygophis lineatus* Amaral — Mem. Inst. Butantan 10: (pro parte)

Type locality — Paraguay

Range: Paraguay, southern Brazil, norther Argentina

Name: Jararaca listada (Brazil)

For details see original description.

Ventrals 162-184 (in η) and 162-179 (in δ) caudals 71-88.

Lygophis flavifrenatus Cope, 1862

- 1862 *Lygophis flavifrenatus* Cope — Proc. Ac. Nat. Sc. Philadelphia: 80
 1867 *Dromicus amabilis* Jan — Icon. Gén. 24. pl. 5, fig. 2
 1885 *Aporophis flavifrenatus* Cope — Proc. Am. Phil. Soc. 22:191
 1886 *Dromicus flavifrenatus* Boulenger — Ann. & Mag. Nat. Hist. (5) 18:433
 1898 *Aporophis flavifrenatus* Boettger — Kat. Seckn. 2:65
 1894 *Aporophis flavifrenatus* Boulenger — Cat. Sn. Brit. Mus. 2:158
 1899 *Aporophis flavifrenatus* Berg — Ann. Mus. Nac. Buenos Aires 2:19
 1936 *Lygophis flavifrenatus* Amaral — Mem. Inst. Butantan 10:

Type locality — "Rio Vermejo Region"

Range: Paraguay, Argentine and Southern Brazil as far north as State São Paulo.

Name: Jararaca listada (Brazil)

Upper labials 8 (except. 9-7) lower labials 10 (except. 9); ventrals
151-170 (in ♀) and 149-161 (in ♂); caudals 68-90.

See original description.

Lygophis amoenus (Jan, 1863)

1863 *Enicognathus amoenus* Jan — Arch. Zool. Anat. Phys. 2:270

1866 *Enicognathus amoenus* Jan — Icon. Gén. 16, pl. 2, fig. 1

1894 *Aporophis amoenus* Boulenger — Cat. Sn. Brit. Mus. 2:160

1929 *Lygophis amoenus* Amaral — Mem. Inst. Butantan 4:169

1936 *Lygophis amoenus* Amaral — Mem. Inst. Butantan 10:

Type locality: unknown

Range: From state of Paraná through São Paulo as far north as State
of Rio de Janeiro

Name: ?

Rostral broader than deep, just visible from above; internasals as long or nearly as long as broad; praefrontals as long as broad, a little longer than the internasals, frontal twice as long as broad, longer than its distance from the end of snout, shorter than the parietals (Boulenger gives, "as long as the parietals"); loreal deeper than long; 1 prae and 2 postoculars; temporals 1-2; upper labials 8, 4th or 5th (or 3th, 4th and 5th) entering the eye; lower labials; lower labials in contact with the anterior chin-shields which are shorter than the posterior; scales in 17 rows ventrals 139-151, subcaudals 72-93; anal divided; olive brown or dark Greyish olive above; a dark vertebral band, visible only on the posterior half of the third (or 2th, or 2th and 3th) lateral row of scales with two lateral whitish spots (Boulenger gives "with a round white spot in the middle"); a narrow dark streak on each side of the head, passing through (or below) the eye; upper labials whitish, sometimes mottled with grey. Ventrals white with a round black dot on each side (♂) or largely mottled with black (♀).

Both males and females have chin tubercles. The males have supraclacal tubercles. Ventrals 139-144 (♂); 143-151 (♀); caudals 72-93.

Lygophis paucidens Hoge, 1952

See original description pg.

In the original description there was some doubt on the possible synonymy with *C. minervae* L., but I have examined the photographs and received observation on the type specimen. So I now am able to assign *C. minervae* to the synonymy of *C. lineatus* L.: *Lygophis paucidens* is a distinct species.

List of *Lygophis* in Butantan Collection*Lygophis amoens*

N.º	Locality	Date	Sexo	D.	V.	A.	C.	U. L.	L. L.	H.	B.	T.
										mm.	mm.	mm.
10.355	Cachoeira	11- 9-12	♀	(State São Paulo)		1/1	72/72	8/8	8/8	22,2	523	18
10.048	Pindamonhangaba	24- 3-39	♂	17	139 + 1/2	1/1	75/75	8/8	9/9	19,8	438	200
10.308	Bananal	23- 2-42	♀	17	151	1/1	86/86	8/8	9/9	22,0	435	190
3.093	Horto Florestal	17- 3-24	♂	17	144	1/1	88/88	8/8	9/9	20,6	472	223
919	?	12- 9-15	♂	17	142 + 1/2	1/1	93/93	8/8	8/8	?	461	239
10.460	Arapongas	10-11-13	♀	(State Paraná)	147	1/1	48/48	8/8	9/9	25,8	683	55
10.504	Arapongas	15- 5-44	♂	17	142 + 1/2	1/1	53/53	8/8	9/9	19,7	430	130
335	Baipendi	11-19-13	♂	17	147	1/1	93/93	8/8	9/9	?	682	310
3.497	?	?	♀	17	139	1/1	84/84	8/8	8/9	25,0	620	280
3.453	?	?	♀	17	144	1/1	29/29	8/8	9/9	25,8	573	97
3.340	?	?	♀	17	140 + 1/2	1/1	86/86	8/8	9/8	21,6	500	237

Lygophilus lineatus dilepis

N.º	Procedencia	Date	Sexo	D.	V.	A.	C.	U. L.	L. L.	H. mm.	B. mm.	T. mm.
8701	S. Gonçalo — R. G. Norte	?	♂	19	?	?	68/66	8/8	10/10	16,2	335	127
8702	S. Gonçalo — R. G. Norte	?	♂	19	?	?	66/66	?	?	?	?	106
8703	S. Gonçalo — R. G. Norte	?	♂	19	?	?	75/75	?	?	?	?	129
723	Ceará	19-12	♀	19	171	1/1	68/68	8/8	10/10	21,1	531	139
890	Ceará	19-15	♂	19	122	1/1	64/64	8/8	10/10	10,0	171	44
12766	Limoeiro do Norte — Ceará	19-15	♀	19	176	1/1	75/75	8/8	10/10	18,0	440	157
12796	Fins Campos — Ceará	18-11-49	♀	19	180	1/1	70/79	8/8	10/10	20,9	527	153
12797	Fins Campos — Ceará	31-1-48	♀	19	173	1/1	71/71	8/8	10/10	17,5	441	139
12798	Fins Campos — Ceará	31-1-48	♂	19	170	1/1	77/77	8/8	10/10	?	335	115
12799	Fins Campos — Ceará	31-1-48	♀	19	176	1/1	76/76	8/8	10/10	?	279	88
12800	Fins Campos — Ceará	31-1-49	♂	19	176	1/1	80/80	8/8	10/10	?	223	69
10111	Itua Assunção — Paraguary	?	♀	19	179	1/1	69/69	8/8	10/10	14,5	335	100
10112	Itua Assunção — Paraguary	?	♀	19	169	1/1	67/66	8/8	9/9	?	360	96
10113	Itua Assunção — Paraguary	?	♀	19	174	1/1	85/85	8/8	9/9	?	377	109
9156	Rio Paraitero — Minas Gerais	?	♀	19	171	1/1	71/71	8/8	9/9	13,2	338	97
9157	Rio Paraitero — Minas Gerais	?	♂	19	177	1/1	75/75	8/8	10/10	16,5	429	143
		?	♂	19	17	1/1	65/65	8/8	10/10	18,9	450	137

Lygophis flavifrenatus Cope
(State São Paulo)

N.º	Locality	Date	Sexo	D.	V.	C.	U.L.	L.L.	A.	II.	III.	T.
										mm	mm	mm
6547	São Paulo	5-11-31	♀	17	164	1/1	68/08	8/8	10/10	18,2	493	170
1043	São Paulo	12-15	♀	17	162	1/1	81/81	8/8	10/9	17,2	490	185
205	São Paulo	?	♀	17	159	1/1	77/77	8/7	10/10	19,0	518	192
1330	São Paulo	6-17	♀	17	156	1/1	78/78	8/8	10/10	16,3	424	160
10289	São Paulo — V. Carrão	9-2-49	♂	17	160	1/1	92/92	8/8	10/10	16,1	398	167
815	São Paulo	12-14	♀	17	159	1/1	78/78	8/8	10/10	17,4	400	155
5962	Cidade Jardim-S. P. ..	26-4-31	♂	17	154	1/1	82/82	8/8	10/10	14,5	338	142
422	São Paulo	3-14	♀	17	157	1/1	87/87	7/8	10/10	10,3	142	50
206	São Paulo	4-16	♂	17	154	1/1	84/84	8/8	10/10	15,0	370	155
611	São Paulo	7-14	♂	17	151	1/1	85/85	8/8	10/10	12,2	268	97
10209	Itaquera	18-10-41	♂	17	161	1/1	83/83	8/8	10/10	14,5	376	149
1526	Barney	3-18	♀	17	156	1/1	59/59	8/8	10/10	16,4	415	120
10206	Itaquera	18-10-41	♂	17	159	1/1	88/88	8/8	10/9	13,4	352	146
10207	Itaquera	18-10-41	♂	17	159	1/1	77/77	8/8	10/10	10,5	234	79
10208	Itaquera	18-10-41	♀	17	165	1/1	77/77	8/8	10/10	10,5	222	79

Lygophis flavifrenatus Cope
(Locality: State Paraná)

N.º	Locality	Date	Sexo	D.	V.	A.	C.	U.L.	L.L.	II.	III.	T.
8045	Caranfei	10-10-33	♀	17	167	1/1	81/81	8/8	10/10	?	488	178
7174	S. José Pinhal	1-4-32	♂	17	156	1/1	79/79	8/8	10/10	15,7	366	144
9715	Anacária	22-3-37	♀	17	163	1/1	74/74	8/8	9/9	15,6	412	140
5349	Ponta Grossa	22-10-30	♀	17	164	1/1	87/87	8/8	9/10	14,2	372	144
5447	Ponta Grossa	22-10-30	♀	17	159	1/1	82/82	8/8	10/10	71,1	435	185
1009	Castro	10-15	♀	17	159	1/1	78/78	8/8	10/10	17,6	435	160
715	Castro	10-14	♀	17	160	1/1	87/87	8/8	10/10	13,7	326	135
3512	?	?	♀	17	156	1/1	78/78	8/8	9/10	18,3	482	168
3635	?	?	♂	17	149	1/1	78/78	8/8	10/10	18,2	415	160
3634	?	?	♀	17	170	1/1	86/86	8/8	10/10	16,2	410	157
207	?	?	♀	17	160	1/1	74/74	8/8	10/10	10,6	200	65

Lygophis flavifrenatus Cope
(State Rio Grande do Sul)

N.º	Locality	Date	Sexo	D.	V.	A.	C.	U. L.	L. L.	II.	III.	T.
9756	Rosário	10-5-37	♀	17	163	1/1	82/82	9/9	10/10	21,2	615	237
9935	Santa Maria	3-3-34	♀	17	168	1/1	79/79	8/8	10/10	17,0	578	217
1661	Pelotas	10-18	♀	17	169	1/1	90/90	8/8	9/9	?	600	240
1795	Pelotas	2-19	♀	17	165	1/1	78/78	8/8	10/9	20,2	578	192
3081	Restinga Seca	2-10-23	♀	17	165	1/1	85/85	8/8	10/9	16,7	510	197
1509	Pelotas	5-18	♀	17	164	1/1	36/36	8/8	10/10	18,7	547	95
9655	Castro	11-1-37	♂	17	151	1/1	75/75	8/8	10/10	18,6	500	180
9389	Itapevi	28-10-35	♂	17	170	1/1	82/82	8/8	10/10	19,9	555	200
6634	São Simão	18-1-37	♀	17	158+172	1/1	83/83	8/8	9/9	19,3	515	210
1796	Pelotas	2-19	♀	17	166	1/1	85/85	8/8	9/9	19,3	512	185
1600	Pelotas	10-19	♂	17	153	1/1	85/85	8/8	10/10	14,0	305	125
1402	Pelotas	2-19	♂	17	157	1/1	83/83	8/8	10/10	12,1	255	100

Lygophis lineatus lineatus
(French Guiana)

N.º	Locality	Date	Sexo	D.	V.	A.	C.	U. L.	L. L.	H. mm.	B. mm.	T. mm.
13.756	Sinnamary	11-7-52	♂	19	160	+	75/75	8/8	10/10	14,7	360	137
13.752	Sinnamary	9-7-51	♀	19	159	+	25/25	8/8	10/?	Cranio	361	48 in]
13.758	Sinnamary	9-7-51	♂	19	163	+	36/36	8/8	9/10	11,9	275	53 in).

Lygophis lineatus meridionalis (Schenkel)
(State São Paulo)

N.º	Locality	Date	Sexo	D.	V.	A.	C.	U. L.	L. L.	H. mm.	B. mm.	T. mm.
8.853	Eng. Róbe	14-11-34	♀	19	173	1/1	80/80	8/8	10/10	19,1	576	205
8.298	Ribeirão	6-12-33	♀	19	174	1/1	80/80	9/8	10/11	20,1	593	207
7.047	Itirapina	7-3-32	♀	19	173	1/1	80/80	8/8	9/10	19,1	515	170
7.533	Casa Branca	17-10-38	♀	19	177	1/1	84/84	8/8	10/10	17,5	627	192
1.711	Bouticari	10-18	♀	19	170	1/1	86/86	8/8	9/9	18,8	528	187
7.552	Cascalhos	24-10-32	♀	19	168	1/1	78/78	8/8	10/11	18,0	460	160
5.354	Lobo	14-7-30	♀	19	179	1/1	86/86	8/8	10/10	20,5	606	221
9.911	Andradas	17-1-38	♂	19	167	1/1	81/83	8/8	9/10	15,3	407	156
9.281	Buri	1-7-35	♂	19	162	1/1	81/81	8/8	10/10	16,6	411	164
8.916	Aracas	3-12-31	♂	19	162	1/1	80/80	8/8	10/10	19,1	540	190
7.550	Conte do Pinhal	9-5-32	♂	19	164	1/1	86/86	8/8	9/9	15,9	358	142
7.681	Pobá	2-1-33	♂	19	174	1/1	82/82	8/8	10/10	17,1	436	154
7.621	Sorocaba	21-11-32	♀	19	175	1/1	87/87	8/8	10/10	14,3	376	127
6.759	Mogi Mirim	7-12-31	♂	19	163	1/1	82/82	8/8	10/10	14,8	355	127
7.531	Cascalho	24-10-32	♀	19	172	1/1	81/81	8/8	10/10	13,7	570	112
10.373	Itapetinga	19-10-42	♀	19	175	1/1	81/81	8/8	10/10	18,7	319	204
9.999	Buri	17-11-38	♀	19	181	1/1	81/81	8/8	10/10	19,4	622	219
9.370	Cateuaça	16-11-35	♀	19	171	1/1	80/80	8/8	9/9	21,6	665	228

Lygophilis lineatus meridionalis (Schenkel)
(State of São Paulo)

N.º	Locality	Date	Sexo	D.	V.	A.	C.	U. J.	l. l.	W.	B.	T.
7 648	Itapetinga	5-12-32	♀	19	175-3	1/1	85/85	8/8	10/10	19,9	57,3	207
8 852	M. Agudo	3-12-31	♀	19	170	1/1	72/72	8/8	10/10	16,6	42,6	145
231	France	?	♀	19	181	1/1	88/88	8/8	11/11	20,1	37,7	210
201	Batatais	9-13	♀	19	169	1/1	76-76	8/8	9/10	20,2	61,4	213
5-425	Cajuru	15-10-30	♀	19	170	1/1	83/83	8/8	10/10	20,0	57,7	209
203	Palmeiras	?	♀	19	168 + 1/2	1/1	80/80	8/8	10/10	18,2	51,9	176
7 221	S. Ant. Alegria	29-8-32	♀	19	174	1/1	84/84	8/8	10/10	17,5	49,9	181
198	São Paulo	?	♀	19	179	1/1	89/89	8/8	10/10	20,2	56,0	215
8 576	Itah	19-10	♀	19	178	1/1	87/84	7/7	9/9	18,7	51,0	200
9 255	Itah	19-10	♀	19	178	1/1	87/84	7/7	9/9	18,7	51,0	200
5 421	Itah	7-5-34	♀	19	172	1/1	81/81	8/8	10/10	19,4	56,7	198
8 139	Rifaina	19-6-35	♂	19	164	1/1	81/81	8/8	10/10	15,2	35,7	140
8 139	Sorocaba	25-10-33	♂	19	164	1/1	81/81	8/8	10/10	15,2	35,7	140
208	Palmeiras	?	♀	19	177	1/1	77/77	8/9	10/10	20,1	58,7	197
9 291	Palmeiras	?	♂	19	165	1/1	85/85	8/8	10/10	16,8	44,2	163
202	Moço Agudo	8-7-35	♀	19	173	1/1	82/82	8/8	10/10	17,0	47,2	163
204	Baratins	?	♀	19	177	1/1	84/84	8/8	10/10	17,5	52,6	178
6 175	Casavel	9-13	♀	19	171	1/1	79-79	8/8	10/10	18,2	70,0	185
7 123	Guaraí	3-8-11	♀	19	162	1/1	10/10	8/8	10/10	12,0	25,6	14
7 123	Pindamonhangaba	14-3-32	♂	19	164	1/1	82/82	8/8	9/9	17,1	46,6	176

Lygophis lineatus meridionalis (Schenkel)
(States Paraná, Mato Grosso and Minas Gerais)

N.º	Locality	Date	Sexo	D.	V.	A.	C.	U. L.	I. L.	H. mm.	B. mm.	T. mm.
4.682	Joaquim Murtinho — Paraná	30-11-28	♀	19	178	1/1	86/86	8/7	9/9	18,8	645	235
9.831	Guaçuvera — Paraná	3- 9-37	♀	19	184	1/1	78/78	7/8	10/10	19,1	657	215
4.317	Ponta Grossa — Paraná	23- 8-29	♀	19	182	1/1	69/69	8/8	10/10	15,3	398	117
4.318	Ponta Grossa — Paraná	23- 8-29	♀	19	175	1/1	85/85	8/8	10/10	14,7	381	132
8.066	Lapa — Paraná	23-10-33	♂	19	170	1/1	85/85	8/8	9/9	15,3	374	136
2.776	Ponta Grossa — Paraná	?	♂	19	164	1/1	84/84	8/8	10/10	16,8	438	164
1.335	Ponta Grossa — Paraná	14-10-29	♂	19	168	1/1	77/77	8/8	10/10	13,9	357	118
9.475	Palmeiras — Paraná	6- 4-36	♀	19	175	1/1	71/71	8/8	10/10	11,7	265	84
11.585	Curitiba — Paraná	13-11-47	♂	19	179	1/1	85/85	8/8	9/9	17,4	485	176
4.336	Ponta Grossa — Paraná	14-10-29	♂	19	174	1/1	75/75	8/8	9/9	15,3	446	145
7.480	Araucária — Paraná	6- 7-32	♂	?	164	1/1	80/80	8/8	10/10	10,2	192	62
10.019	Terenos — Mato Grosso	9- 1-39	♀	19	173	1/1	80/80	8/8	10/10	22,1	617	230
8.792	Terenos — Mato Grosso	12-11-34	♀	19	171+1/2	1/1	83/83	8/8	10/10	17,1	430	156
10.237	Terenos — Mato Grosso	12-11-34	♀	19	176	1/1	55/55	8/8	9/9	?	515	165
8.842	Uberaba — Minas Gerais	7-11-41	♀	19	173	1/1	88/88	8/8	10/10	18,4	513	200
2.127	S. Bárbara — Minas Gerais	1-21	♀	19	167	1/1	84/84	8/8	10/10	13,1	273	98

Lygophis paucidens Hoge

S.º	Locality	Date	Sexo	D.	V.	A.	C.	U.L.	ll.	B.	T.
1225	Theresina-Piaul ..	-17	♀	17	169	1/1	68/68	8/8	?	443	136
10448	Ipameri-Gdaa ...	2-8-43	♀	17	171	1/1	62/62	8/8	17.7	422	127
1226	Theresina-Piaul ..	-17	♀	17	168	1/1	64/64	8/8	17.1	430	132
1227	Theresina Piaul ..	-17	♀	17	168	1/1	68/68	8/8	15.3	395	128
12812	S. Domingos-Ma. to Grosso	18-11-49	♀	17	136	1/1	72/72	8/?	?	400	130
12801	S. Domingos Ma. to Grosso	15-11-49	♀	17	171	1/1	66/66	8/8	14.9	390	118
12016	Mato Verde-Mato Grosso	24-9-48	♀	17	174	1/1	63/63	8/8	15.1	377	107

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SUMMARY

A brief discussion on Brazilian *Lygophis* forms is presented. Following forms are arised from the synonymy of *lineatus*: *L. lineatus dilepis* Cope and *L. lineatus meridionalis* Schenkel. Only subspecific rank was assigned to this forms.

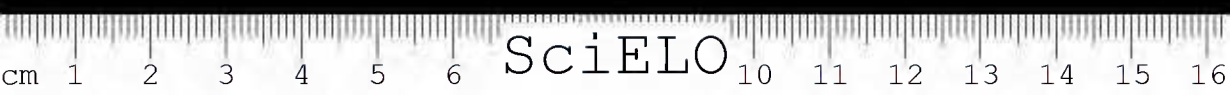
RESUMO

Curta discussão das formas brasileiras de *Lygophis*. Foram revalidadas as seguintes formas: *lineatus* L., *dilepis* Cope e *meridionalis* Schenkel. A todas foi conferido valor subspecífico.

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FIG. 1

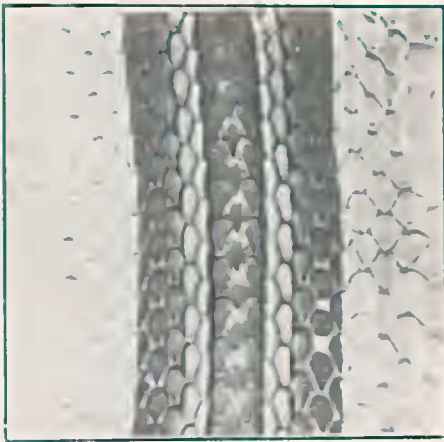


FIG. 2



FIG. 3

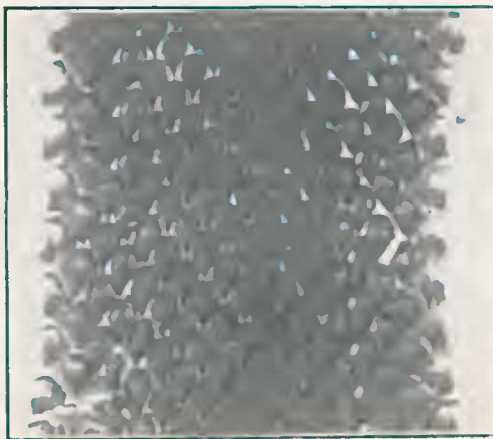


FIG. 4

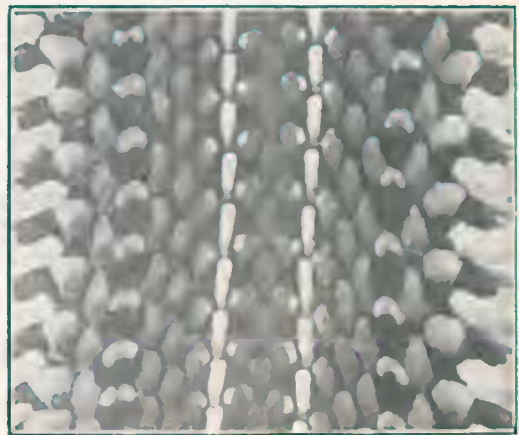


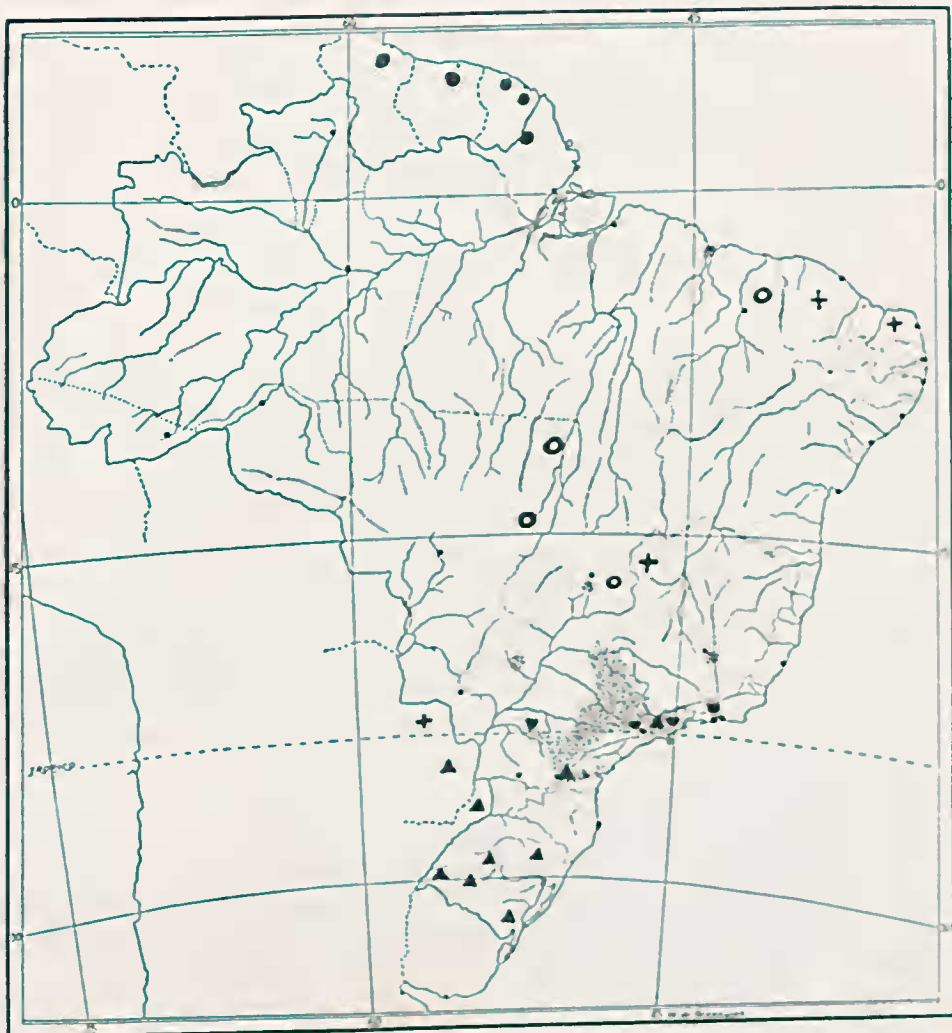
FIG. 5

- Fig. 1 — *L. lineatus lineatus* (L.)
 2 — *L. lineatus flexilis* Cope
 3 — *L. lineatus meridionalis* (Schenkel)
 4 — *L. amoenus* Jan
 5 — *L. flavifrenatus* Cope








Pl. I (Foto)

Type specimen of *Lygophis lineatus lineatus* (L. 1758)
(Foto U. Bergström)



RANCE (specimens in Butantan collection)

-  *L. lineatus meridionalis*
-  *L. lineatus amoenus*
-  *L. lineatus dilepis*
-  *L. paucidentis*
-  *L. lineatus lineatus*
- 